

**DISPLACEMENT OF CONJUGATE POINT DUE TO LOCALIZED FIELD-ALIGNED CURRENT**

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We would like to consider the effect of the localized field-aligned current (FAC) on the displacement of the conjugate point, based on the auroral and magnetic observation at Syowa - Iceland conjugate stations.

Apparent azimuthal displacement of the conjugate point was observed during expansion to recovery phase of a substorm on 26-27 September, 2003. A north-south aligned structured discrete aurora (N-S aurora) with diffuse region behind it appeared from east and drifted westward both at Syowa Station in the Antarctic and Tjornes in Iceland. The appearance at Syowa was apparently earlier than at Tjornes. Magnetic variation at both stations suggested that a positive potential region should exist in front of the N-S aurora and a negative potential region should exist behind it. Those positive and negative potential pair should correspond to the localized downward and upward FAC, respectively, associated with the N-S aurora. In other words, such a localized FAC system could be responsible to the displacement of the conjugate point. Such an azimuthally drifting N-S aurora is frequently observed during the expansion to recovery phase of a substorm. We will examine other such cases using the data during whole auroral observation period at Syowa in 2003, and elucidate the relationship between the displacement and the drifting motion of the N-S aurora. In our next step, we would like to estimate the characteristics of the displacement quantitatively by using MHD global simulation.